

Sony International (Europe) GmbH  
„Optimized Synchronization Structure“  
FB99022

Abstract

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The invention is based on the synchronization and training preambles. The optimizes  
sequence is very suitable to generate a preamble or a part (also called field) of it by  
mapping the sequence to the appropriate subcarriers of a OFDM symbol with a FFT  
10 size of 64. The benefit of the invention is the improved timing accuracy when the  
autocorrelation result in the B-FIELD is used for synchronization. The time domain  
structures of the preambles according to the prior art are not changed according to the  
invention. The advantages of the present invention can be summarized as follows:  
The invention proposes an OFDM based synchronization symbol with a low peak-to-  
15 average-power-ratio and a small dynamic range,  
- the synchronization performance (timing accuracy compared to current preambles) is  
improved,  
- the specified time domain preamble structures according to the prior art are not  
modified, and  
20 - no extra complexity is needed.

(figure 1)